

REMARKS

I. Status of Claims

Claims 1-19 and 21-131 are pending. Claims 43-131 have been withdrawn. No claims are amended herein.

II. Rejections under 35 U.S.C. § 103

A. Bore

The Examiner has rejected claims 1-6, 10, 11, 18, 19, 23, and 38-42 under 35 U.S.C. § 103(a) over Bore. According to the Examiner, Bore “teaches an aqueous composition for lanthionizing hair comprising at least one hydroxide compound, at least one reducing agent and at least one complexing agent” Office Action at 3. Yet the Examiner admits that “the reference does not require such a composition with sufficient specificity to constitute anticipation.” *Id.*

The Examiner, however, still concludes that the rejected claims would have been obvious because “such a composition comprising effective amounts of at least one hydroxide compound, at least one reducing agent and at least one complexing agent falls within the scope of those taught by Bore” *Id.* Applicants respectfully traverse.

The Examiner has nowhere established that Bore teaches or suggests at least one complexing agent, as claimed herein. While the Examiner states that Bore teaches a “complexing agent such as triethanolamine” in Example 15 (Office Action at 3), triethanolamine is not, in fact, a complexing agent. As the instant specification discloses, “the at least one complexing agent may comprise at least one ‘soft’ entity chosen from ‘soft’ bases [such as triethanolamine] and ‘soft’ cations **and at least one anion chosen from chelating anions and sequestering anions.**” Specification at page 20, paragraph [053] (emphasis added). A complexing agent must contain at least

one anion chosen from chelating anions and sequestering anions in order to be a complexing agent.

Example 15 of Bore teaches only a 'soft' base (triethanolamine), and not at least one anion chosen from chelating anions and sequestering anions. Absent at least one anion chosen from chelating anions and sequestering anions, **triethanolamine alone is not a complexing agent**. As Example 15 does not teach or suggest at least one complexing agent, each and every element of the claims is not taught by the reference. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

B. Bore in view of Mathews

The Examiner has rejected claims 7-9, 21, 22, 24, and 34-37 under 35 U.S.C. § 103(a) over Bore in view of U.S. Patent No. 4,816,246 to Mathews et al. ("Mathews"). According to the Examiner, Bore does not teach "the specific species of alkaline metal sulfites or the other species of the complexing agents claimed." Office Action at 4.

The Examiner attempts to cure this deficiency by resorting to Mathews, stating that Mathews "teaches a composition comprising ammonium thioglycolate compounds . . . and a sequestering agent . . . and chelating agents . . . wherein the composition is formulated from water soluble components . . . which implies that the dissociation is full" *Id.* From this, the Examiner concludes that combining the references would have been obvious because "Bore clearly suggests the use of sulfur-containing compounds . . . and complexing agents of triethanolamine in the composition and the secondary reference of Mathews teaches the use of ammonium thioglycolate compounds as the

reducing agents and the sequestering agents (complexing agents) in the hair treating composition” *Id.*

As discussed above, triethanolamine is not a complexing agent, and Bore does not in fact teach or suggest a complexing agent. Accordingly, the references do not teach or suggest all of the claim limitations, and the rejection should be withdrawn.

Moreover, as Applicants discussed in their February 27, 2004, Response, the Examiner has not, as he must, established any suggestion or motivation to combine Bore and Mathews. M.P.E.P. § 2143. The Bore reference is directed towards lanthionization of hair, while the Mathews reference discloses a shampoo composition. Bore emphasizes throughout the disclosure that the pH of the composition must be “between about 10.5 and 13.” See, e.g., Bore at Abstract; col. 2, l. 23; and col. 5, l. 41. Mathews, however, is directed towards a permanent wave composition, and emphasizes throughout the disclosure that the pH is considerably lower than Bore’s 10.5 to 13. See, e.g., Mathews at Abstract and col. 2, ll. 35-42 (preferred embodiment has pH ranging from 9 to 9.5); col. 2, ll. 45-48 (pH can also be from 6.8 to 7.2).

As one of ordinary skill in the art would readily realize, lanthionization would not occur at the low pH disclosed in Mathews. Therefore, the Examiner has not explained why one of ordinary skill in the art would be motivated to combine the complexing agents of Mathews, such as the sequestering and chelating agents, with the composition of Bore.

The Office Action fails to address this point, merely stating in general that “Applicant’s arguments with respect to claims 1-42 . . . are moot in view of the new ground(s) of rejection. Yet this argument still applies as the Examiner has failed to

show any suggestion or motivation to combine reference teachings. Therefore, no *prima facie* case of obviousness has been established, and Applicants respectfully request withdrawal of this rejection.

C. Bore in view of Au

Claims 12-17, 25-27, and 29-33 have been rejected as obvious over Bore in view of U.S. Patent No. 5,872,111 to Au et al. ("Au"). The Examiner admits that Bore "does not teach at least one cation exchange component (thickeners) and the complexing agents as claimed," but attempts to rectify this deficiency by relying on Au as teaching "a shampoo composition comprising clay materials such as aluminum silicates as thickeners," as well as other components of the rejected claims (namely, specific examples of the claimed at least one complexing agent), such as tripotassium phosphates, disodium silicates, citric acid, and amino acids. Office Action at 5. Thus, the Examiner concludes that the proposed combination of references would have been obvious because Au "clearly suggests the use of these ingredients in the shampoo compositions for rendering such compositions more formulatable, or aesthetically and/or cosmetically acceptable" *Id.* Applicants respectfully traverse.

The Examiner has failed to establish, as he must, any suggestion or motivation to combine reference teachings. See M.P.E.P. § 2143. Au teaches that the tripotassium phosphates and disodium silicates referenced by the Examiner are "used to maintain a neutral pH or to accelerate the rate of the reaction . . .", and the citric acid cited by the Examiner is used as a "pH adjusting agent[]." Au at col. 25, ll. 12-15 and col. 10, l. 63. Bore, however, teaches a process for lanthionization carried out "with a composition having a pH between about 10.5 and 13." Bore, col. 2, ll. 22-23; *see also id.* at Abstract

and col. 2, l. 27. Thus, one of ordinary skill in the art would find no motivation to combine the neutral composition of Au with the basic composition of Bore.

Furthermore, while the Examiner has failed to establish any motivation to combine the teachings of Bore and Au, even assuming *arguendo* such a combination were made, one of ordinary skill in the art would have no reasonable expectation of success. Maintaining a neutral pH, as suggested by Au, would not be expected to affect lanthionization of keratinous fibers. Bore clearly teaches that “the proportion of lanthionization is higher the higher the pH of the composition according to the invention.” Bore, col. 2, ll. 64-66. There would thus be no expectation that a composition at neutral pH, as taught by Au, would successfully lanthionize hair, which requires a basic pH. Therefore, Applicants respectfully request withdrawal of this rejection.

D. Bore in view of Mathews and further in view of Au, and Bore in view of Mathews, Au, and Pyles

Claim 28 has been rejected as obvious over Bore in view of Au, and further in view of U.S. Patent Application Publication No. 2001/0008630 A1 to Pyles et al. (“Pyles”). The Examiner notes that neither Bore nor Au teaches sodium glutamate as a sequestering agent, but states that Pyles “teaches in other analogous art a hair conditioning composition comprising sodium glutamate” Office Action at 6. Thus the Examiner concludes that the suggested combination would be obvious because “Bore suggest[s] the use of adjuvants that [are] usually used in creams and gels” *Id.* Pyles in no way rectifies the deficiencies of Bore and Au, discussed above. Therefore, Applicants respectfully request withdrawal of this rejection.

III. Conclusion


In view of the foregoing remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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